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# **ORIGINAL**

December 15, 2005

Josh L. Roland

Ms. Marlene H. Dortch Secretary Federal Communications Commission 445 12th Street, S.W. Washington, D.C. 20554 RECEIVED

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Federal Communications Commission
Office of Secretary

Re:

Ex Parte Submission

Iridium Satellite LLC, Special Temporary Authority, File Nos. SAT-STA-20050923-00180/00181; Letter from R. Michael Senkowski to Marlene Dortch, dated November 1, 2005

Review of the Spectrum Sharing Plan of the Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands, IB Docket No. 02-364.

Dear Ms. Dortch:

Attached is Globalstar's response to the questions raised by counsel for Iridium Satellite LLC in his letter dated November 1, 2005. A copy of this response is being filed by hand for inclusion in IB File Nos. SAT-STA-20050923-00180/00181 and in IB Docket No. 02-364.

Respectfully submitted,

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cc:

Robert G. Nelson Chip Fleming

R. Michael Senkowski

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December 14, 2005

Marlene H. Dortch, Secretary Federal Communications Commission 445 Twelfth Street, S.W. Washington, D.C. 20554

Re:

Ex Parte Submission

Iridium Satellite LLC, Special Temporary Authority, File Nos. SAT-STA-20050923-00180/00181; Letter from R. Michael Senkowski to Marlene Dortch, dated November 1, 2005

Review of the Spectrum Sharing Plan of the Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands, IB Docket No. 02-364.

#### Dear Ms. Dortch:

This letter responds to the questions raised by counsel for Iridium Satellite LLC ("Iridium") in his letter dated November 1, 2005. The various questions and issues raised by Iridium have been restated below in **bold face** with our responses to them in *italic face*.

## 1. The radio link failure (RLF) in Channel 7 increased before the STA.

The STA affected Globalstar's Channel 7 only from 1617.495 to 1618.25 MHz, but the complete Globalstar channel 7 band is from 1617.495 to 1618.725 MHz. The 1618.25 to 1618.725 MHz part of channel 7, as well as the 1618.725 — 1619.955 MHz portion of Channel 8, continues to be shared with Iridium before and after the STA. Therefore, the point raised by Iridium that the increase in Channel 7 and 8 RLF is only due to self-interference from Globalstar is not true. The increase in RLF in Channels 7 and 8 is due to the high system loading of both systems during the period following the hurricane. The reduction in the RLF for Channel 7 for one day after the STA is due to the addition of a new frequency, Channel 3, at the gateway and the gateway assigning new users to Channel 3 rather than 7 and 8, as stated previously.

# 2. Question 6 (System performance at other gateways)

Other gateways have successfully carried much higher traffic without the level of radio link failure seen in Clifton.

#### 3. Question 7 (Radio Link Failure Data)

This was due to the gateway assigning most of the new users in Channel 3. Globalstar performed a test in which we swapped Channel 4 with Channel 7. The loading on Channel 3 and 4 was balanced and the RLF on Ch 4 was comparable to Ch 3, in contrast with the high RLF observed on Channel 7.

# 4. Questions 11 and 12 (Relationship between Frame Error Rate (FER) and RLF)

- a. There is no direct way to differentiate between the self-interference and external interference in a CDMA system. But, if loading of the channels is similar (as shown in the first technical exhibit filed with Globalstar's October 17 letter), then the self-interference is almost identical. Any increase in FER is then due to external interference.
- b. Globalstar recently conducted a test in which we changed the frequency assigned to Clifton from Channel 7 to Channel 4. There was an immediate effect on the radio link failures. The RLF in Channel 4 was very similar to that observed for Channel 3 and not comparable to Channel 7. Also, when we changed the assignment from Channel 4 back to 7, the RLF failures for Channel 7 returned to the unusually high rate. Channel 8 continued to be serving Clifton during this test, and, unlike Channel 4, it continued to show the high RLF.
- c. The next logical step in Globalstar's investigation is to study the Channel 7 performance without Iridium carriers in the 1618.25 to 1618.725 MHz part of channel 7. Hence, Globalstar has requested Iridium to assist us by turning off the use of about 500 kHz of bandwidth from 1618.25 to 1618.725 MHz for 24 hours.

### 5. Question 13 (Return Link Failure on Channel 3)

To isolate the effect of new users on RLF in Channel 3, Globalstar queried the database to determine the channel assigned to new users. Globalstar agrees that a significant decrease in the RLF after the hurricane was due to the reduction in load; however, we maintain that the comparatively higher RLF to the average RLF in Channel 3 is attributable to the new users being assigned to Channel 3.

Should you have further questions concerning this matter, please contact the undersigned or Josh Roland at WilmerHale at (202) 663-6266.

Sincerely,

William F. Adler

Vice President-Legal & Regulatory Affairs

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cc:

Robert G. Nelson Chip Fleming

R. Michael Senkowski